LDV-3

Low Voltage Unipolar Step Motor Driver

USER'S MANUAL (V1.2)

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Thank you for your purchasing LDV-3 low voltage unipolar step motor driver.
The specifications and function descriptions are as follows:

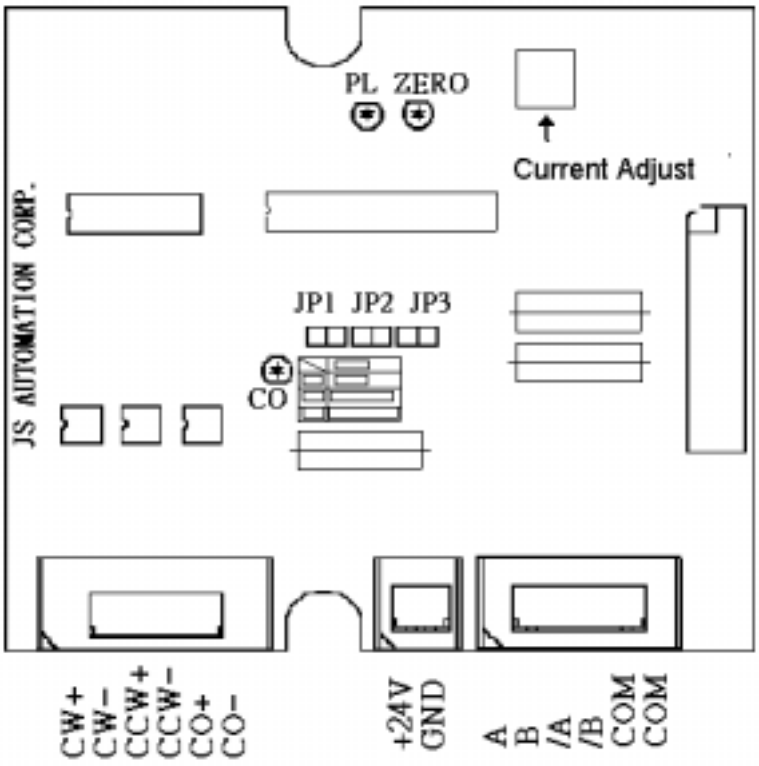
1. Specifications

1.1 Max output:1.5A per phase, recommand to use any unipolar step motor with phase current less than 1.5A.

1.2 Auto power down:
standby more than 2sec, auto power down to 60% of rated current

1.3 Current off:
controlled by external terminal input to release motor.

2. Layout



3. JUMPER

JUMPER	JUMPER function	
	SHORT	OPEN
JP1	1 Pulse Mode	Dual Pulse Mode
JP2	HALF STEP	FULL STEP
JP3	FULL POWER	HALF POWER

Note:The motor maybe overheat while setting driver at full power mode. If the application need full holding torque at stand still, it is recommend to use a fan to ventilation.

Function description

1. 1 Pulse Mode：
   to control the motor rotation by clock input and the direction by direction
   Note: CW+,CW_ terminal used as CLOCK input in "1 pulse mode"
   CCW+,CCW- terminal used as DIRECTION input in "1 pulse mode"
2. Dual Pulse Mode：
   to control the motor clockwise rotation by CW+,CW- and counter clockwiserotation by CCW+,CCW-
3. HALF STEP：
   to step the half rated step angle
   Note: 4 phase step motor rated step angle is 1.8 degree, and half step is 0.9 degree, this means 400 step per revolution at half step mode.
4. FULL STEP：
   to step the rated step angle
5. FULL POWER：
   driver supplies the step motor at adjust current in spite of runing or stand still.
6. HALF POWER：
   driver supplies the step motor at adjust current in runing and half power at stand still.

4. Current Adjust

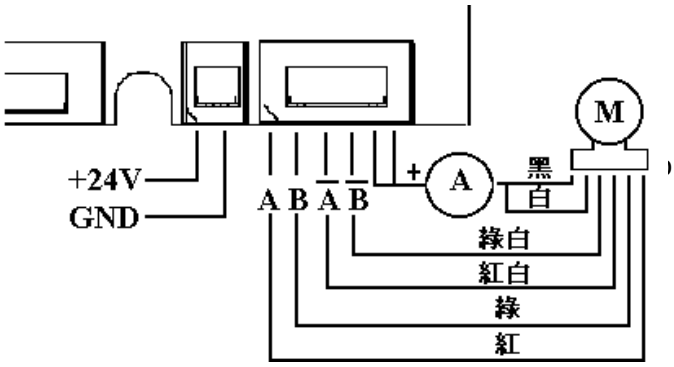
Cw direction adjust to increase step motor current, max up to driver rated current.
ccw direction adjust to decrease step motor current.

Note: If you want to measure the exact current flow in the step motor, please connect the motor with the driver as follows and set driver at

- full power mode
- full step mode
- no pulse input (just power on)

5. Indicators

PL：power
ZERO：active phase return to original state mode)
CO：LED lights while motor in current off



6. Terminals

6.1 CW+,CW-/(CLOCK+,CLOCK-)：
dual pulse mode: clockwise pulse input
1 pulse mode: rotation pulse input
6.2 CCW+,CCW-/(DIR+,DIR-)：
dual pulse mode: counter clockwise pulse input
1 pulse mode: rotation rirection input
6.3 CO+,CO-：
step motor current command input
6.4 +24V：power supply input rated 24V
6.5 GND：ground of +24V
6.6 A：syep motor A phase coil
6.7 B：syep motor B phase coil
6.8 $\overline{A}$：syep motor /A phase coil
6.9 $\overline{B}$：syep motor /B phase coil
6.10 COM：step motor common node

Note: 1. Do not make any connection change while power on.
2. Please refer to motor data sheet to confirm the phase.